

Remarks

Reconsideration of this Application is respectfully requested.

I. Status of the Claims

Claims 143-146, 148-158 and 161-171 are pending in the application, with claims 143 and 144 being the independent claims. Claims 147, 159, and 160 were previously cancelled without prejudice to or disclaimer of the subject matter therein.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

II. The Office Action

A. Claim to Priority has been Established

At page 2 of the Office Action, the Examiner asserts that the disclosure of Application No. 09/294,584, to which the captioned application claims benefit, fails to provide adequate support for one or more claims under 35 U.S.C. § 112, 1st Paragraph. Applicants respectfully disagree. For reasons detailed in the following section regarding the New Matter rejection under 35 U.S.C. § 112, 1st Paragraph, Applicants submit that the present claims are fully supported by U.S. Application No. 09/294,584 and by U.S. Provisional Application No. 60/082,581 ("the Priority Document"), of which the subject application also claims benefit, and which was incorporated by reference into the subject application.

B. The Rejection Under 35 U.S.C. § 112, 1st Paragraph is Traversed

Claims 143-146, 148-158 and 161-171 stand rejected under 35 U.S.C. § 112, 1st Paragraph, as allegedly failing to comply with the written description requirement on the ground that the claims contain new matter. Office Action at page 3. Applicants respectfully traverse this rejection.

At page 4 of the Office Action, the Examiner maintains the assertion that there is no literal written description for the claimed subject matter. Applicants respectfully maintain that, for the reasons already provided in Applicants' previous reply, an improper standard for determining the sufficiency of the written description has been used. Furthermore, Applicants respectfully disagree with the contention that they have not provided any evidence to refute the written description rejection besides attacking the reasoning of the Examiner.

"To satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention." MPEP § 2163 (I) (citations omitted). This possession may be shown in any number of ways. For example, for new or amended claims, the MPEP specifically states that "there is no *in haec verba* requirement," and that support for newly added claim limitations may be provided "through ***express, implicit, or inherent*** disclosure." MPEP § 2163(I)(B) (emphasis added). To determine whether the specification provides express, implicit, or inherent disclosure, "the fundamental factual inquiry is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed." *Id.* (citing *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d at 1563-64, 19 USPQ2d at 1117 (Fed. Cir. 1991)). Applicants respectfully submit that such reasonable clarity is present in the specification.

At pages 8 and 9 of the reply filed on August 3, 2009, Applicants showed that both the specification as filed and the priority document contain disclosure indicating that, when GnTIII (and GalT) are expressed, decreased fucosylation (*i.e.*, increased

nonfucosylation) will occur. In addition, Applicants specifically pointed to Figure 15, which also provides at least implicit support for the term "increased proportion of nonfucosylated oligosaccharides." In Figure 15, the antibody produced at the highest levels of GnTIII expression (C2B8-25t), would also have the highest number of bisected GlcNAc residues. Accordingly, as explicitly stated in the specification, there would be fewer fucosylated oligosaccharides (*i.e.*, an increased proportion of nonfucosylated oligosaccharides) because such glycan structures "could no longer be biosynthetic substrates for core α 1,6-fucosyltransferase." See Specification at page 38, lines 2-6 (citing Schachter 1986, *Biochem. Cell Biol.* 64:163-181). This antibody, C2B8-25t, produced **under the highest level of glycosyltransferase expression**, also **had the highest levels of ADCC**. Specification at Figure 15 and page 42, line 32 to page 43, line 18. Hence, the specification as a whole, including the figures, provides explicit and implicit support for the claims. Applicants respectfully submit that a person of ordinary skill in the art would have readily understood that the claimed invention was explicitly and implicitly described in the specification as a whole at the time of filing.

At pages 4-5 of the Office Action, the Examiner asserts--erroneously, in view of the above--that Applicants must rely on inherent disclosure for the claimed subject matter and contends there is no inherent support. Applicants respectfully disagree. Contrary to the Examiner's assertion at page 5 of the Office Action that "a negative correlation was found between increased ADCC and nonfucosylated oligosaccharides," it is noted that, for the CE7-2000t, CE7-60t and CE7-30t antibodies represented in Figures 9B-D and 11, an increased proportion of non-fucosylated residues did, in fact, correlate with an increase in ADCC. As additional support, it is seen from the C2B8-nt,

C2B8-2000t, C2B8-50t, and C2B8-25t antibodies shown in Figure 15 that increased GnTIII expression--which, as discussed above, leads to an increased proportion of non-fucosylated residues--correlates completely with an increase in ADCC.

When properly reviewing the basis for the rejection in view of the record as a whole (MPEP § 2163.04 II), it is clear that there is explicit and implicit written description support for the claims as of the filing date of the 09/294,584 application and that the claims are entitled to their earliest priority date. Also, for reasons set forth in Applicants previous reply, the claims also have inherent written description support. Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. § 112, first paragraph, be reconsidered and withdrawn.

C. The Rejections Under 35 U.S.C. § 102 are Traversed

Claims 143-145, 148-155, 157, 158, 161-167, and 169-171 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Nakamura *et al.*, *Cancer Res.* 54: 1511-1516 (1994), as evidenced by Shinkawa *et al.*, and Raju *et al.* Applicants respectfully traverse this rejection.

The Examiner asserts that the claims are considered to be product-by-process claims and that the claimed antibodies have the same structure as the antibodies of Nakamura *et al.*, regardless of how they were produced. Office Action at page 6. Applicants respectfully disagree with these assertions.

First, the claims do not recite process limitations or "how the claimed antibodies are to be made." Rather, the claims recite certain features of the antibodies (*e.g.*, "genetically glycoengineered"), but do not require that a particular method be used to

make the antibodies. This is analogous to the claims at issue in *Amgen Inc., v. Hoechst Marion Roussel Inc.*, which recited certain limitations about where the claimed protein, EPO, could or could not be derived (*e.g.*, purified from mammalian cells in culture, not derived from urine, *etc.*), but which were found not to be process limitations. *Amgen Inc., v. Hoechst Marion Roussel Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003). The Federal Circuit determined that "[t]he limitation ['purified from mammalian cells grown in culture'] only speaks to the source of the EPO and does not limit the process by which the EPO is expressed. Rather, the claim is broadly drawn to a 'pharmaceutical composition' having certain elements, one of those being EPO 'purified from mammalian cells in culture.'" *Id.* Likewise, the present claims do not recite process limitations.

Second, it is clear from the present specification that a genetically glycoengineered antibody can be distinguished from an antibody that has not been genetically glycoengineered based on its glycosylation profile. Nakamura *et al.* merely expressed antibodies in unmodified YB2/0 cells, which yields antibodies that are not genetically glycoengineered. Hence, Nakamura *et al.* do not teach each and every limitation of the claims, and the claims are not anticipated.

Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) be reconsidered and withdrawn.

Claims 143-146, 148-158 and 161-171 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Umaña *et al.*, PCT Publication No. WO 99/54342. Applicants respectfully traverse this rejection. The present application claims the benefit of parent US Application No. 09/294,584, filed the same day and with the same specification as WO 99/54342, both of which claim benefit of the same priority document. As

established above, the claims are fully supported by the specification of US No. 09/294,584, and are entitled to the earliest priority date. Hence, PCT Publication No. WO 99/54342 is not prior art against the claims and cannot anticipate the claims. Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) be reconsidered and withdrawn.

D. The Rejection for Obviousness-Type Double Patenting Is Traversed

Claims 143-147, 149-155, 157, 158, 161, 162, 164-167, and 169-171 have been provisionally rejected on the ground of nonstatutory obviousness-type double patenting over claims of copending Application No. 11/348,526. Applicants note that the pending application issued on May 25, 2010, as U.S. Pat. No. 7,722,867. Applicants respectfully traverse this rejection. However, Applicants respectfully request that the rejection be held in abeyance until subject matter that is otherwise patentable is identified, at which time Applicants will consider filing a Terminal Disclaimer.

III. Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Reply dated December 23, 2010 - 8 -
Reply to Office Action of November 25, 2009

UMAÑA *et al.*
Appl. No. 10/633,699

Prompt and favorable consideration of this Amendment and Reply is respectfully
requested.

Respectfully submitted,

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